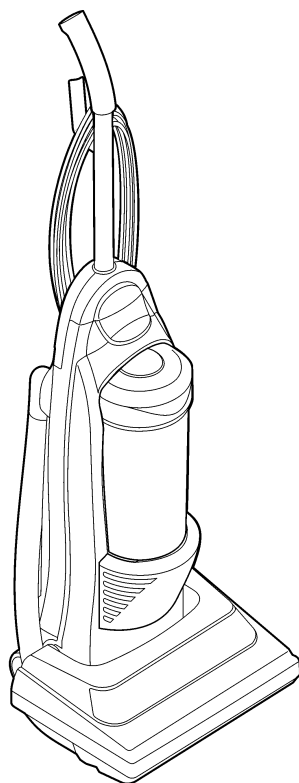


Service Manual

Vacuum Cleaner**MC-V414 00**

Model	MC-V414-00
Power Source	AC 120V (60 Hz)
Power Consumption	10.0 Amps
Cord Length	50 Ft.
Motor Protector	Yes
Height Adjust	Auto
Weight	16.0 lbs.

Specifications are subject to change without notice for further improvement.

WARNING

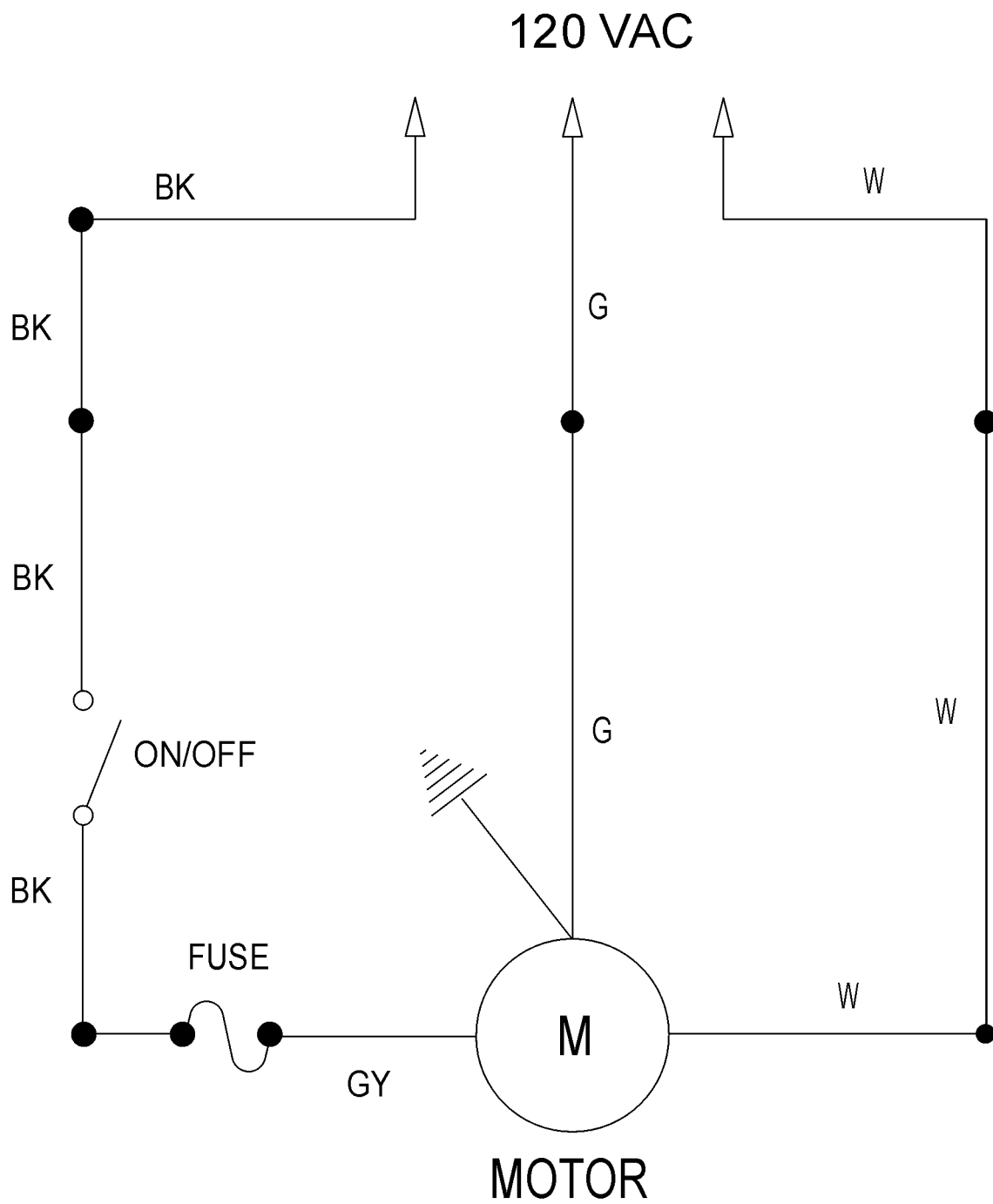
This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic®

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1 WIRING DIAGRAM AND DRAWING

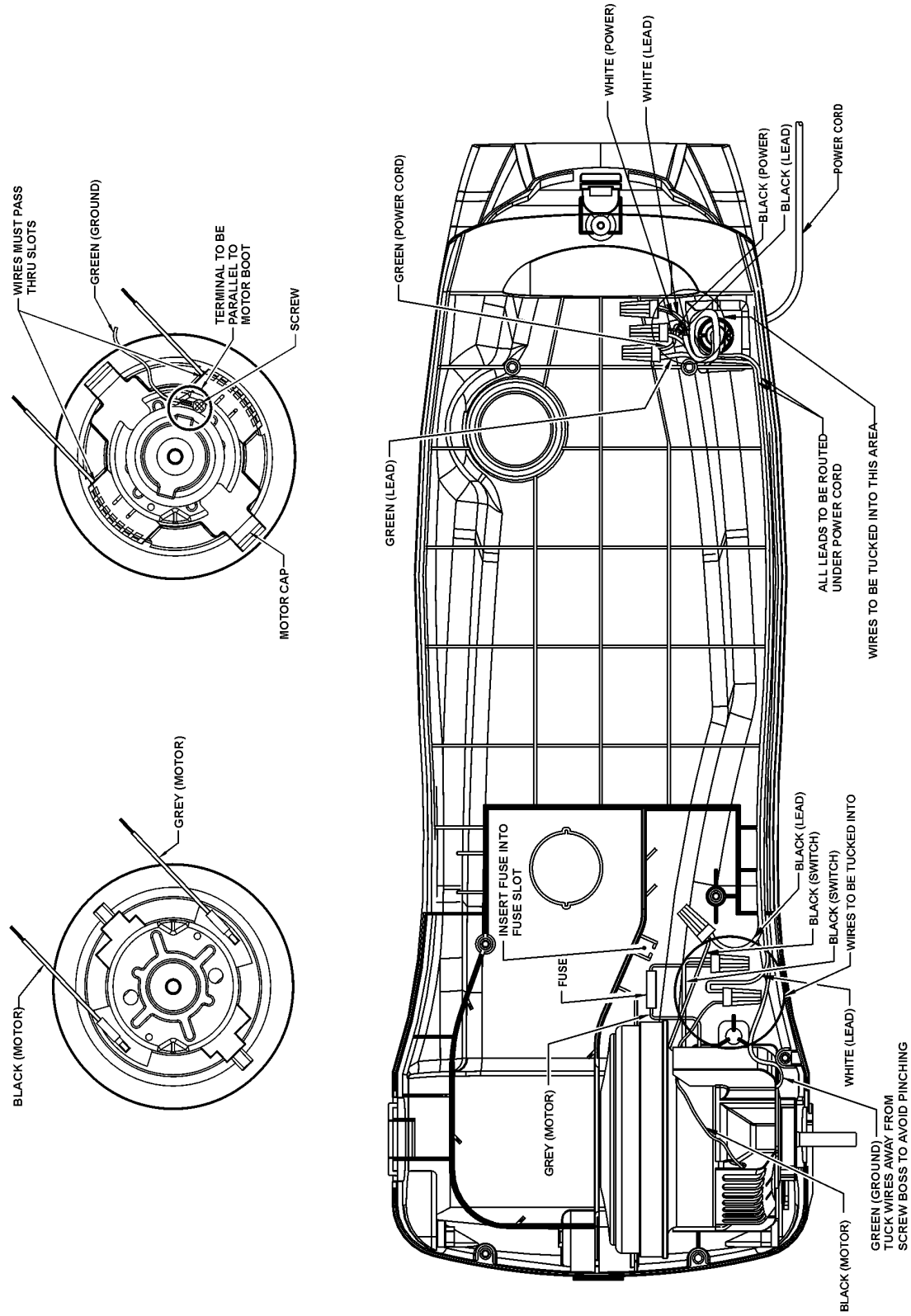
1.1. Wiring Diagram



1.2. PICTORIAL DIAGRAM

NOTE:

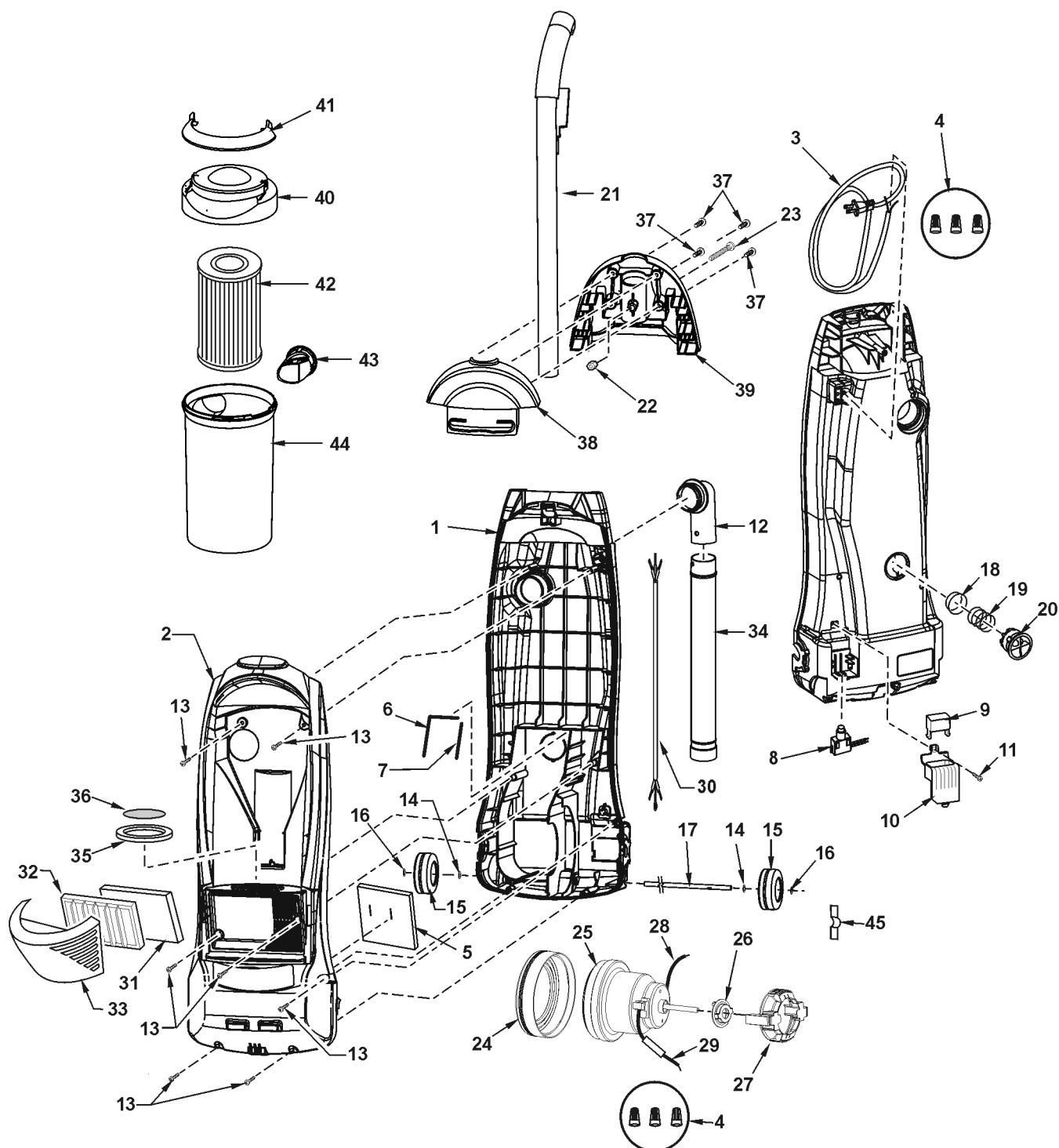
For general servicing, it is necessary to eliminate pinching of any wire during reassembly. After servicing any electrical component or electrical enclosure, the unit should be reassembled and checked for dielectric breakdown or current leakage.



2 EXPLODED VIEW AND PARTS LIST

2.1. Body

2.1.1. Exploded View



2.1.2. Parts List (Body)

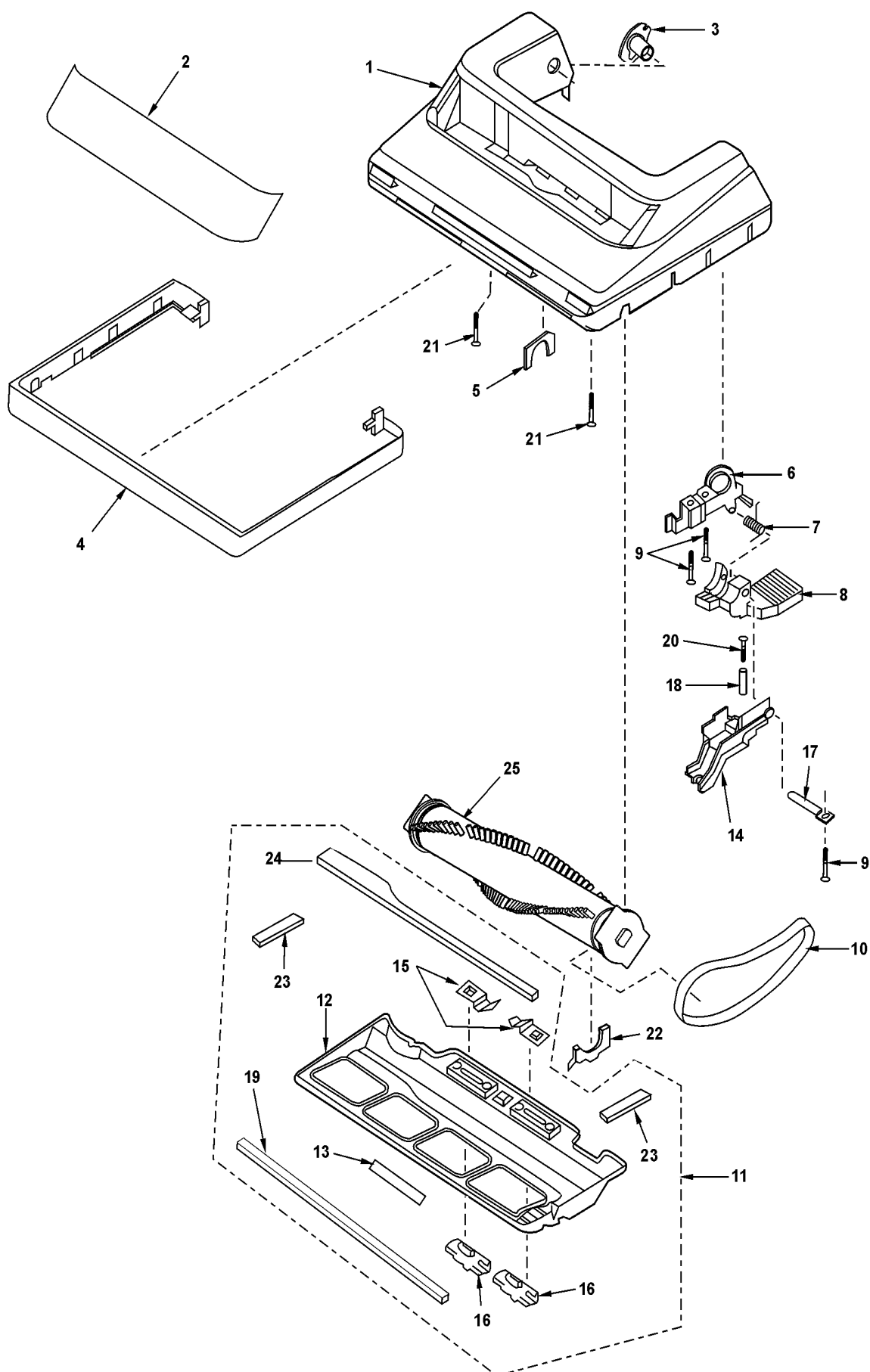
Ref. No.	Part No.	Part Name & Description	Quantity	Remarks
1	AC78KCHTZV07	Dust Compartment	1	Includes Items C-6 & C-7 Packing
2	AC60KBRSZU01	Dust Cover	1	
3	AC94EAPNZY02	Power Cord	1	
4	AMC-1CTCE23	Wire Connector	6	
5	AC02LBJAZ000	Rear Cover Packing	1	
6	AC40AYUZV00	Body Packing, Left	1	
7	AC39AAJFZV00	Body Packing, Right	1	
8	AC01EAMMZ000	On/Off Switch	1	
9	AC01EAMMZV07	ON/Off Button	1	
10	AC03EAMMZV07	Switch Cover	1	
11	AXTN4+16BFY	Screw, Switch Cover	1	
12	AC60KCHTZV07	Suction Inlet	1	
13	AXTN4+16BFY	Screw, Body	7	
14	AXWG6E115Y	Washer (Wheel)	2	
15	AMC01C-V00U	Wheel	2	
16	AC74SUSZ00	Stopper (Wheel)	2	Shipped 10 per package
17	AC16CUSZ00	Shaft, Roller	1	
18	AC69KJMV06	Protector	1	
19	AC70KAGZZR00	Protector Spring	1	
20	AC68KJMV06	Protector Cover	1	
21	AC95BCHTZV07	Handle Assembly	1	
22	AMP21B-170	Nut, Handle	1	Shipped 10 per package
23	AMC73B-V00	Screw, Handle	1	
24	AC03FAFVZ000	Motor Support, Rubber (Rear)	1	
25	AC92FAWRZ00	Motor, Fan	1	
26	AMC02F-E00	Motor Support, Rubber (Front)	1	
27	AC26FCHTZ000	Motor Cap	1	
28	AC38GARTZ000	Lead Wire, Motor	1	
29	AC99WBDNZ000	Lead Wire Assembly	1	
30	AC37GTEZ0U	Wire Cord	1	
31	AC37KBVWZ000	Filter, Exhaust (Foam)	1	
32	AC43ABRSZ000	Frame, Filter	1	
33	AC41KCHFZU03	Cover, Filter	1	
34	AC34PVO2V00	Hose	1	
35	AC74KBFEZ000	Packing, Dust	1	
36	AC37KBYDZ000	Secondary Filter	1	
37	AXTN4+16BFY	Screw, Handle	4	Shipped 10 per package
38	AC06BCHTZV07	Handle Cover A	1	
39	AC07BCHTZV07	Handle Cover B	1	
40	AC14BCHFZV07	Handle Lid	1	
41	AC64BBFEZV07	Handle	1	
42	AC95KBRSZ000	Filter Unit	1	
43	AC95KBFEZ000	Valve Grommet	1	
44	AC42KCHTZBUU	Screw, Handle	1	
45	AC78NZAZ000	Plastic Holder	1	

Remove zero "0"

Remove 2 zero's "00"

2.2. Nozzle Housing

2.2.1. Exploded View



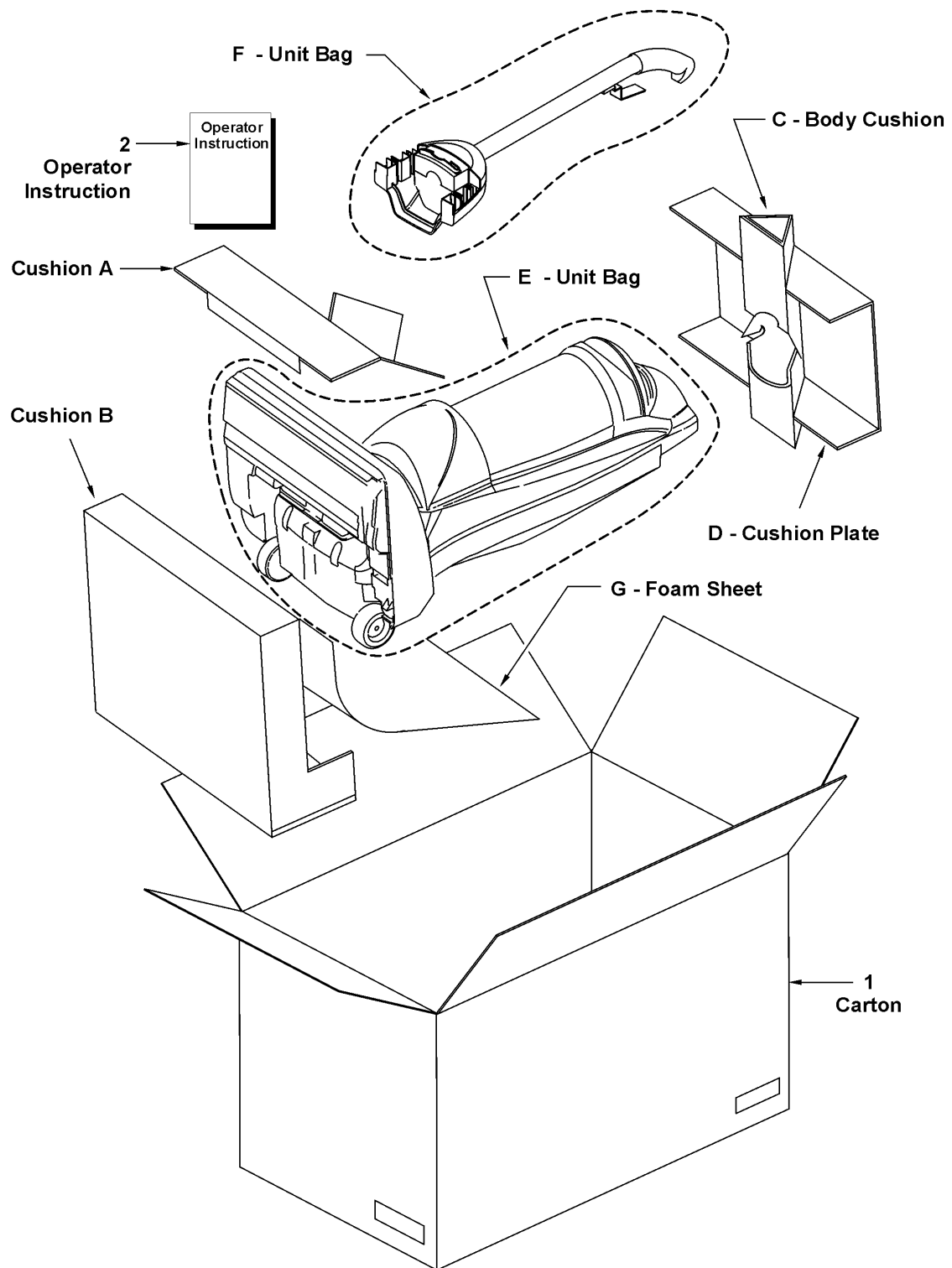
2.2.2. Parts List (Nozzle Housing)

Ref. No.	Part No.	Part Name & Description	Quantity	Remarks
1	AC01ACHTZU03	Nozzle Housing	1	
2	AC21H2XZU03	Window	1	
3	AMC25S-V00	Shaft (Plastic)	1	
4	AC10A2VZV07	Furniture Guard	1	
5	AMC81A-V00	Packing (Nozzle)	1	
6	AMC43A-2V0	Frame	1	
7	AMC58A-2V0	Spring (Pedal)	1	
8	AMC47A-2V0U	Pedal	1	
9	AXTN4+16BFY	Screw (Frame)	3	
10	AC28SJPZ00	Belt	1	
11	AC91AARFZ00	Lower Plate Assembly	1	
12	AC27AADGZ00	Lower Plate	1	
13	AC07ZADFZ00	Warning Label	1	
14	AMC11S-2V0W	Belt Cover (Rear)	1	
15	AC70N0VZU0	Stop Latch Spring	1	
16	AMC68N-V30K	Latch	2	
17	AMC51A-2V0	Pedal Shaft	1	
18	AMC74S-Z100G	Spacer	1	
19	AC74AAAEZ00	Packing (Lower Plate Front)	1	
20	AXTN4+28BFY	Screw (Spacer)	2	
21	AMC68A-V30	Screw (Nozzle)	2	
22	AMC82A-2V00	Agitator Holder	3	
23	AMC39A-2V0	Packing (Lower Plate Sides)	1	
24	AMC74A-2V0	Packing (Lower Plate Back)	1	
25	AC84RBZDZ000	Agitator Unit	1	

Change the 5 to "S"

2.3. Packing Material

2.3.1. Exploded View



2.3.2. Parts List

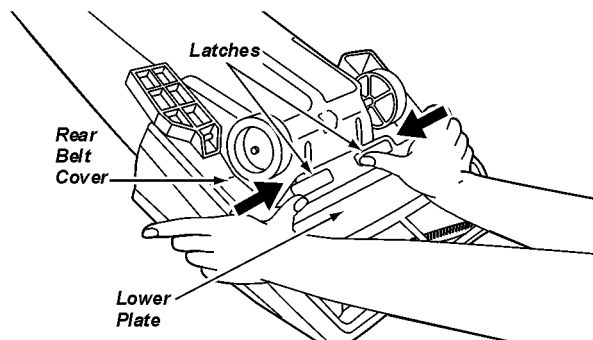
Ref. No.	Part No.	Part Name & Description	Quantity	Remarks
1	AC61ZCHTZ000	Packaging Assembly	1	Includes 1 and items a-g
2	AC01ZCHTZ000	Operating Instructions	1	

3 REPLACEMENT INSTRUCTIONS

3.1. Lower Plate

3.1.1. Removal

1. Place handle in low position.
2. Turn the vacuum cleaner over exposing the underside. Release the lower plate by pressing the two (2) latches that secure it inward.
3. Separate the lower plate from the vacuum.



3.1.2. Installation

1. Close the rear belt cover.
- 2.
3. Hook the front of the lower plate into the slots on the front of the nozzle housing. Press the lower plate down into place.
4. Fasten the lower plate by pushing the two (2) latches outward.
5. **NOTE:** For general servicing, it is necessary to eliminate pinching of any wire during reassembly. After servicing any electrical component or enclosure, the unit should be reassembled and checked for dielectric breakdown or current leakage.

3.2. Belt Replacement

3.2.1. Removal

1. Follow the removal instructions outlined in the AGITATOR ASSEMBLY REMOVAL/INSTALLATION section.

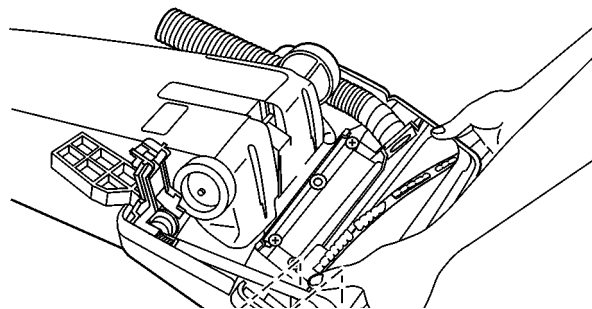
3.2.2. Installation

1. Place the new belt around the motor shaft and follow the installation instructions in the AGITATOR ASSEMBLY REMOVAL/INSTALLTION section.

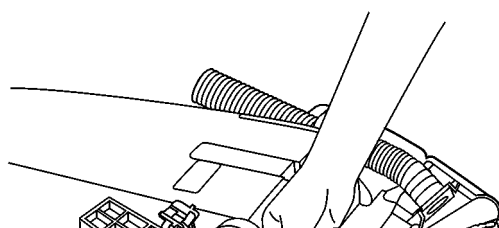
3.3. Agitator Assembly

3.3.1. Removal

1. The brushes are not replaceable separately. When the brushes need replacing, the agitator assembly will have to be replaced.



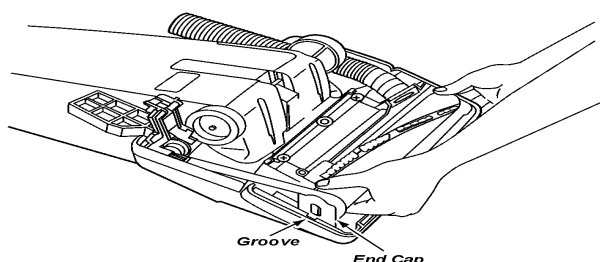
2. Carefully lift up on the agitator assembly until it clear both sides of the nozzle housing.



3. Remove the belt from the motor shaft by sliding it off between the end of the shaft and the nozzle housing.

3.3.2. Installation

1. Place the belt around the motor shaft.

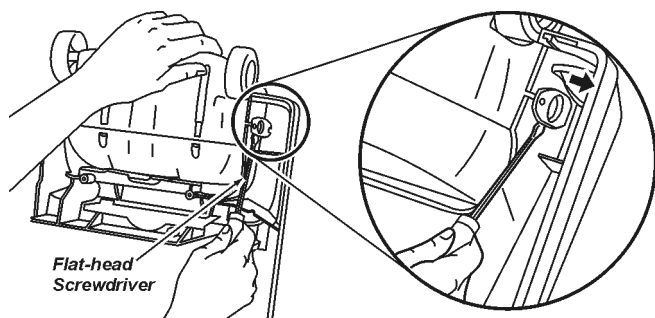


2. Place the belt around the agitator pulley on the agitator assembly.
3. Reassemble the new agitator assembly back into the nozzle housing by placing the side opposite the belt partially into the slot. The small tabs should be aligned with the nozzle. This will hold the agitator in place and leave both hands free to place enough tension on the belt to allow that side of the agitator to return to the nozzle housing slot.
4. Rotate the agitator assembly by hand to insure nothing rubs and to check for correct assembly.
5. Replace lower plate.

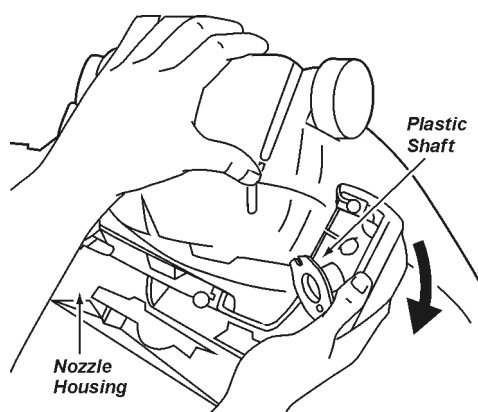
3.4. Nozzle Housing Replacement

3.4.1. Removal

1. Remove the lower plate as outlined in the LOWER PLATE REMOVAL/INSTALLATION section.
2. Remove the belt and agitator assembly as outlined in the respective sections.
3. Remove the nozzle hose by pulling up on the hose to remove it from the nozzle housing. Pull the nozzle hose out of the back of the nozzle housing.



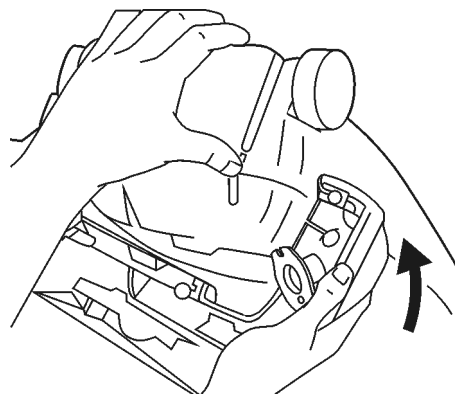
4. Insert a flat blade screwdriver between the nozzle housing and the plastic shaft. Pry out the plastic shaft as illustrated.



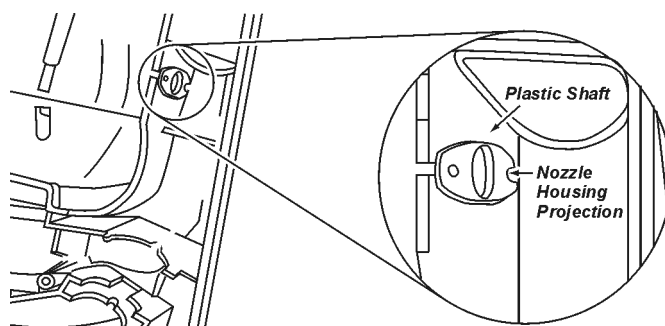
5. Remove the nozzle housing as illustrated.
6. Remove the nozzle packing, window and handle release assembly.

3.4.2. Installation

1. Install the nozzle packing, if not already in place, window and handle release assembly in the new nozzle housing.
2. Fit the nozzle around the motor shaft side first, and rotate it into place on the dust container as illustrated.



3. Slide the plastic shaft through the nozzle housing and into the dust container. Make sure that the slot on the bottom of the plastic shaft is down and seated onto the projection.

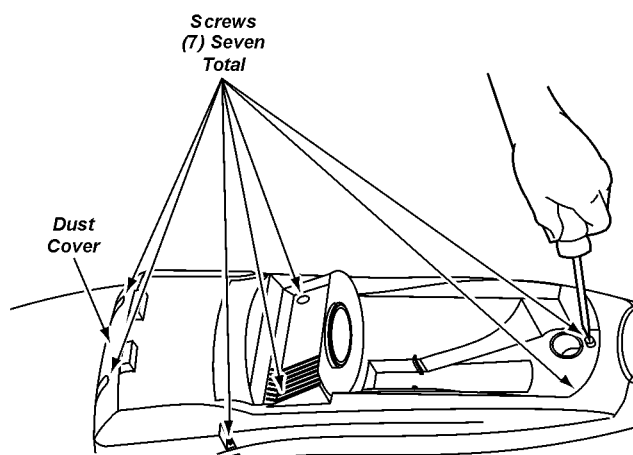


4. Reassemble the nozzle hose by inserting it into the nozzle housing. Push the nozzle hose down into the slot in the nozzle housing. Make sure that the tab on the hose supporter is inserted into the slot.
5. Install the belt, agitator assembly, and the lower plate according to the respective instructions.

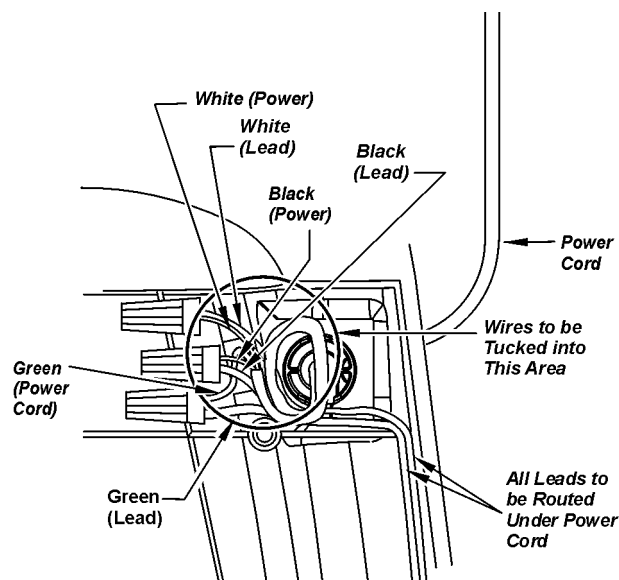
3.5. Power Cord Replacement

3.5.1. Removal

1. Remove the seven (7) screws that secure the dust cover and remove the dust cover.



2. Remove the two (2) wire connectors, disconnect the wires and pull the cord from the back of the unit.



3.5.2. Installation

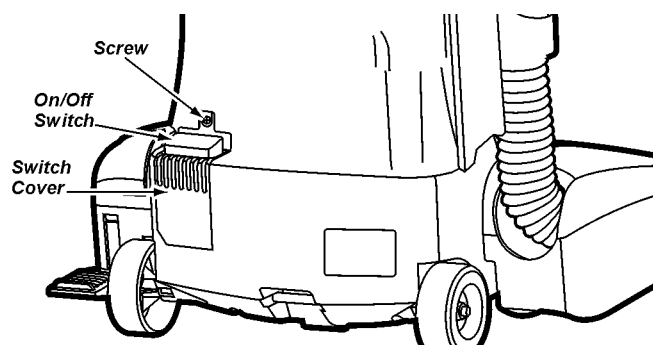
1. Insert the new cord into the dust container and wrap around the strain relief as shown above.
2. Rewire per the wiring diagram and secure using the two (2) wire connectors that were removed earlier.
3. Route all wiring according to the wire management drawing shown earlier in this manual.
4. Install the dust cover by first ensuring all wiring are routed correctly so that no wires may be pinched during assembly.

NOTE: For general servicing, it is necessary to eliminate pinching of any wire during reassembly. After servicing any electrical component or electrical enclosure, the unit should be reassembled and checked for dielectric breakdown or current leakage.

3.6. On / Off Switch

3.6.1. Removal

1. Remove the nozzle cover, agitator assembly, belt and nozzle base.
2. Remove the seven (7) screws that secure the dust cover and remove the dust cover.
3. To replace the on-off switch, remove the plastic insert that is mounted over the motor shaft. Lift the motor up and out of the dust compartment. Take care to note the position of the wires so they can be properly tucked when replacing the motor.
4. Remove the screw that secures the switch cover and remove the switch cover. Remove the two (2) wire connectors, disconnect the switch lead wires and slide the wires out of the back of the unit.



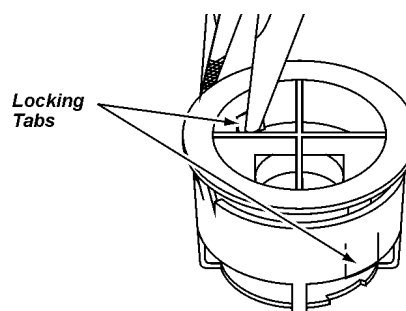
3.6.2. Installation

1. For installation of a new on-off switch, insert the lead wires through the opening in the back of the dust container and rewire per the wiring diagram. Secure the wires using the two (2) wire connectors that were removed earlier. Snap the new switch into the proper slots in the dust container.
2. Reassemble the switch cover and the screw that secures it. Reassemble the motor by following the installation instructions in the MOTOR REPLACEMENT section. Reassemble the plastic insert.

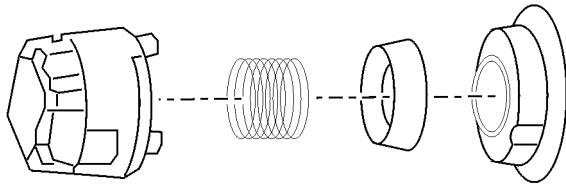
3.7. Motor Replacement

3.7.1. Removal

1. Remove the seven (7) screws that secure the dust cover and remove the dust cover.
2. Remove the motor protector located inside the dust compartment by pushing in on the two retaining tabs. Do one side at a time while pushing out on the motor protector from inside the dust compartment.
3. Once the motor protector has been removed it can be disassembled for replacement of parts.



3.7.2. Installation



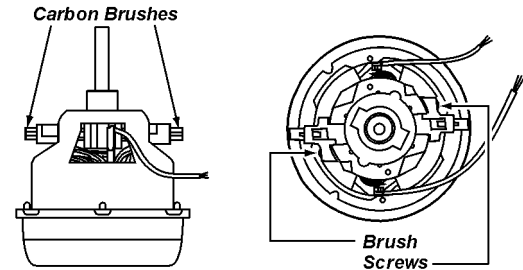
1. Reinstall the motor protector into the dust compartment by aligning the two tabs under the top flange with the slots in the dust compartment by applying pressure from the back of the vacuum until it snaps into place.
2. Install the dust cover by first ensuring all wiring is routed correctly so that no wires may be pinched during assembly.

NOTE: For general servicing, it is necessary to eliminate pinching of any wire during reassembly. After servicing any electrical component or electrical enclosure, the unit should be reassembled and checked for dielectric breakdown or current leakage.

3.8. Carbon Brush Replacement

3.8.1. Removal

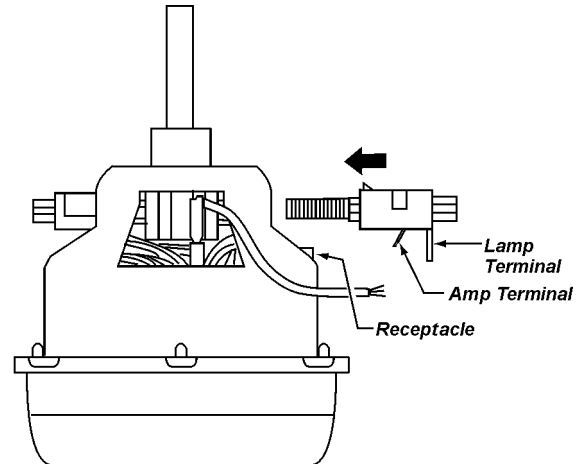
1. Complete brush change on one side before starting on the other side. There are two (2) brushes located on the motor as identified. Remove the brush assembly by using a Phillips head screwdriver to remove the screw that holds the brush holder onto the motor.



NOTE: Do not drop screws into the motor.

3.8.2. Replacement

1. Place new brush assembly on the motor.



2. Make sure that the amp terminal on the bottom of the brush assembly is inserted into the receptacle on the motor.
3. Replace the Phillips screw that was removed.
4. Repeat steps 1-3 for the other brush assembly.